Listing of Claims:

This listing of claims reflects all claim amendments and replaces all prior versions and listings of claims in the application. Material to be inserted is in **underline**, and material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) in double brackets [[ ]].

1.   (Currently Amended) A display device comprising:

a Fresnel lens having a plurality of bumps **affixed to or formed** on an output side of the Fresnel lens;

a lens system to project an image;

a substantially planar back plate mirror to reflect the image to the Fresnel lens, the back plate mirror substantially parallel to the Fresnel lens; and

a substantially planar intermediate mirror to reflect the image projected by the lens system to the back plate mirror, the intermediate mirror being substantially parallel to the back plate mirror, wherein the intermediate mirror is substantially perpendicular to the optic axis of the lens system.

2.   (Original) The display device of claim 1, wherein at least one of the plurality of bumps has a different size than another one of the plurality of bumps.

3.   (Original)The display device of claim 2, wherein each of the plurality of bumps has a different size.

4.   (Original)The display device of claim 1, wherein the plurality of bumps is randomly distributed over the output side of the Fresnel lens.

5.   (Original)The display device of claim 1, wherein at least one of plurality of bumps has a different shape than another one of the plurality of the plurality of bumps.

6.   (Original)The display device of claim 5, wherein each of the plurality of bumps has a different shape.

Page 2   -   RESPONSE TO OFFICE ACTION
                 Serial No. 10/693,615

7.   (Original)The display device of claim 6, wherein the plurality of bumps is randomly distributed over the output side of the Fresnel lens.

8.   (Original)The display device of claim 1, wherein the plurality of bumps are of unitary construction with the Fresnel lens.

9.   (Original)The display device of claim 8, wherein the Fresnel lens includes a diffuser to diffuse stray light that passes through the Fresnel lens.

10.   (Original)The display device of claim 9, wherein the diffuser is of unitary construction with the Fresnel lens.

11.   (Cancelled)

12.   (Original)The display device of claim 1, wherein the plurality of bumps comprises a plurality of lenticular bumps.

13.   (Cancelled)

14.   (Original)The display device of claim 12, wherein the plurality of lenticular bumps are of unitary construction with the Fresnel lens.

Page 3   -   RESPONSE TO OFFICE ACTION
                Serial No. 10/693,615

15.   (Original)A display device comprising:

a Fresnel lens to display an image, the Fresnel lens having an output ray angle of substantially zero near a center of the Fresnel lens and an output ray angle whose magnitude increases as a radial distance (R) from the center increases;

a lens system to project the image;

a substantially planar back plate mirror to reflect the image to the Fresnel lens, the back plate mirror substantially parallel to the Fresnel lens; and

a substantially planar intermediate mirror to reflect the image projected by the lens system to the back plate mirror, the intermediate mirror being substantially parallel to the back plate mirror, wherein the intermediate mirror is substantially perpendicular to the optic axis of the lens system.

16.   (Original)The display device of claim 15, wherein the Fresnel lens has a groove angle λ, a face angle γ, and an output ray angle β wherein,

the face angle γ is given by

$$\gamma = \tan^{-1}\left(\frac{n\,\sin\{\beta' + \lambda\} + \sin(\theta + \lambda)}{n\,\cos\{\beta' + \lambda\} - \cos(\theta + \lambda)}\right) + \lambda - \frac{\pi}{2},$$

wherein β' is given by $\beta' = \sin^{-1}(\sin\beta/n)$; and

the output ray angle β is given by

$$\beta = \beta_1 + \sum_{k=1}^{4}\Delta_k\left[\left\{1 + \left(1 + \frac{R - R_0}{R_s - R_0} - \frac{R_k - R_0}{R_s - R_0}\right)^m\right\}^{\frac{1}{m}} - 1\right], \text{ wherein } \Delta_1 \text{ is given by}$$

$$\Delta_1 = \frac{\beta_2 - \beta_1}{\dfrac{R_2 - R_0}{R_s - R_0} - \dfrac{R_1 - R_0}{R_s - R_0}} \qquad \text{and} \qquad \Delta_k \qquad k>1 \qquad \text{is} \qquad \text{given} \qquad \text{by}$$

$$\Delta_k = \frac{\beta_{k+1} - \beta_k}{\dfrac{R_{k+1} - R_0}{R_s - R_0} - \dfrac{R_k - R_0}{R_s - R_0}} - \frac{\beta_k - \beta_{k-1}}{\dfrac{R_k - R_0}{R_s - R_0} - \dfrac{R_{k-1} - R_0}{R_s - R_0}}, \text{ and further wherein } R_k \text{ and } \beta_k \text{ are given by}$$

k	1	2	3	4	5
R [mm]	260	300	650	950	1232

Page 4 -   RESPONSE TO OFFICE ACTION
               Serial No. 10/693,615

β [°]	0	0	0	5.5	8.5

, wherein m is equal to 16 and R_0 is 230 millimeters.

17.   (Original)The display device of claim 16, wherein the groove angle λ is between 35° and 45°.

18.   (Original)The display device of claim 17, wherein the groove angle λ is 38°.

19.   (Original)A rear projection display device comprising:

a lens system to project an image; and

a Fresnel lens to receive the projected image, the Fresnel lens having a screen diagonal D and a focal distance L as a distance between the Fresnel lens and a projection lens, wherein a ratio of D to L is greater than 3.0.

20.   (Original)The rear projection display device of claim 19, wherein the ratio of D to L is between 3.0 and 12.0.

21.   (Original)The rear projection display device of claim 20, wherein the ratio of D to L is between 3.0 and 9.0.

22.   (Original)The rear projection display device of claim 21, wherein the ratio of D to L is between 3.0 and 5.0.

23.   (Original)The rear projection display device of claim 22, wherein the ratio of D to L is between 3.0 and 4.5.

24.   (Original)The rear projection display device of claim 23, wherein the ratio of D to L is approximately equal to 3.6.

25.   (Original)The rear projection display device of claim 23, wherein the ratio of D to L is approximately equal to 4.1.

26.   (Original)The rear projection display device of claim 19, further comprising a back plate mirror to receive the projected image from the wide-angle lens system and to reflect the received image to the Fresnel lens.

27.   (Original)The rear projection display device of claim 26, wherein the back plate mirror comprises a substantially planar back plate mirror and wherein the back plate mirror is substantially perpendicular to the optic axis of the lens system and substantially parallel to the Fresnel lens.

28.   (Original)A display device comprising:
a screen having a diffusion layer;
a lens system to project an image;
a substantially planar back plate mirror to reflect the image to the screen, the back plate mirror substantially parallel to the screen; and
a substantially planar intermediate mirror to reflect the image projected by the lens system to the back plate mirror, the intermediate mirror being substantially parallel to the back plate mirror, wherein the intermediate mirror is substantially perpendicular to the optic axis of the lens system.

29.   (Original)The display device of claim 28, wherein the screen is a Fresnel lens.

30.   (Original)The display device of claim 29, wherein the diffusion layer is affixed to

Page 6   -   RESPONSE TO OFFICE ACTION
              Serial No. 10/693,615

an output side of the Fresnel lens.

31.   (Original)The display device of claim 30, wherein the diffusion layer is laminated to the output side of the Fresnel lens.

32.   (Original)The display device of claim 29, wherein the diffusion layer is of unitary construction with the Fresnel lens.

33.   (Currently Amended)A display device comprising:

a screen including a Fresnel lens, where the Fresnel lens has a plurality of bumps adapted to scatter stray light, **the bumps having a substantially convex cylinder shape**;

a lens system to project an image; and

a substantially planar back plate mirror to reflect the image to the screen, wherein the back plate mirror is substantially perpendicular to the optic axis of the lens system and substantially parallel to the screen.

Page 7   -   RESPONSE TO OFFICE ACTION
               Serial No. 10/693,615